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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,521	04/05/2004	Paul D. Perry	2003P04912US-01	4882

7590 08/28/2006  
SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

EXAMINER

SCHNEIDER, CRAIG M

ART UNIT PAPER NUMBER

3753

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/817,521	<b>Applicant(s)</b> PERRY ET AL.	
	<b>Examiner</b> Craig M. Schneider	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/29/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Oath/Declaration***

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
The specification recites U.S. Provisional application 60/547,602. This provisional application needs to be mentioned in the Oath.

### ***Drawings***

1. Applicant's arguments, see page 8, filed 6/21/06, with respect to showing the features of the thermistor, capacitive switch, a float and contact switch, a magnet and reed switch, a resistive coil switch, an optical switch and a resistance/conductance detector have been fully considered and are persuasive. The objection of the drawings has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 9-11 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Withrow et al. (2,575,574).

Regarding claims 9-11, Withrow et al. disclose a bi-directional valve (16)(col. 2, lines 48-55) apparatus comprising a first vapor flow path extending from a first port (19)(col. 3, lines 29-31), through a liquid (27)(col. 3, lines 59-65), to a second port (21)(col. 3, lines 44-46), and vapor flow along the first vapor flow path occurs when

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there is a first pressure differential between the first and second ports, and a second vapor flow path extending from the second port, through the liquid, to the first port, and vapor flow along the second vapor flow path occurs when there is a second pressure differential between the first and second ports; wherein the first vapor flow path traverses a first chamber in fluid communication with a first reservoir (area at top of housing around inlet pipe 15), and the second vapor flow path traverses a second chamber in fluid communication with a second reservoir (area inside cup around second port 21)(col. 4, lines 7-68 and claim 4).

Regarding claims 14 and 15, Withrow et al. disclose a valve that manages vapor pressure. The valve has a chamber as seen in Figure 2 in vapor communication between first and second ports. Liquid is disposed within the chamber and separates the chamber into a first (B) and second (A) portions. The first condition is displacing a first volume of the liquid from the first portion of the chamber to the second portion of the chamber in response to a first negative pressure differential between the first and second ports. The second condition is displacing a second volume of the liquid from the first portion of the chamber to the second portion of the chamber in response to a second negative pressure differential between the first and second ports, the second volume being greater than the first volume, and the second negative pressure differential being greater than the first negative pressure differential. The third condition is displacing a third volume of the liquid from the second portion of the chamber to the first portion of the chamber in response to a positive pressure differential between the first and second ports.

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 1-8, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withrow et al. in view of Harris (6,199,574).

Withrow et al. disclose a valve apparatus comprising a housing (18)(col. 3, lines 26-29) defining an interior chamber, a first reservoir and a second reservoir, the housing further including first and second ports communicating with the interior chamber and a liquid separating the interior chamber into first and second portions, the first portion of the interior chamber being in fluid communication with the first port and the first reservoir, and the second portion of the interior chamber being in fluid communication with the second port and the second reservoir. Withrow et al. further discloses that the housing comprises external and internal walls; the external wall (18) surrounds the interior chamber, and the internal wall (extension of 15 to 21 and 22) projects from the

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external wall into the interior chamber. Withrow et al. further disclose that the first end is in fluid communication with the first port and that the second end of the tube contiguously engages the liquid (the cup 22 is in contact with the liquid as seen in Figure 2). Withrow et al. does not disclose a sensor disposed in the interior chamber. Harris discloses a sensor (62) disposed in the interior chamber (col. 8, lines 38-51).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the sensor as disclosed by Harris onto the valve of Withrow et al. in both chambers A and B, in order to sense the presence of liquid (col. 5, line 66 onto col. 6, line 1).

Regarding claim 2, the combination of Withrow et al. and Harris disclose that the sensor detects a pressure differential between the first and second ports.

Regarding claim 3, the combination of Withrow et al. and Harris disclose that the sensor detects displacement of the liquid in response to the pressure differential.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 9-15 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's arguments filed 6/21/2006 in regards to the sensor with respect to claims 1-8 have been fully considered but they are not persuasive. Applicant argues that the sensor of Harris does not detect fluid behavior nor can it detect pressure differentials between the first and second ports or displacement of the liquid in response to such a pressure differential. The sensor of Harris does detect pressure differential simply by its location in the housing. If the sensor is located above the normal operating

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characteristics of the fluid it would then be able to detect that there is a pressure differential when the fluid level reaches the sensor.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig M. Schneider whose telephone number is (571) 272-3607. The examiner can normally be reached on M-F 8:30 -5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMS *CMJ*  
August 18, 2006



**ERIC KEASEL**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3700**